

New analysis of Apollo lunar samples solves decades-old mystery

A NASA-funded research team has confirmed the origin of organic matter found in lunar samples collected during the Apollo missions. It has long been known that the soil samples collected in the late 60s and early 70s contained amino acids, but the technology to determine where they came from has not been available until now.

Amino acids are the building blocks of proteins, which are central to creating organic structures like skin and hair. When the organic matter was found in soil samples brought back from the moon during the Apollo missions, there was a question regarding how exactly it had ended up there, as the environment on the lunar surface is completely inhospitable to any known forms of life. It's generally accepted that there are four possibilities.

Solar winds. The first possibility is that the solar wind—a weak charged particles from the sun—contained the constituent elements of amino acids, and landed them on the lunar surface, with them later forming together to form the organic matter.

Rocket exhaust. The second possibility is similar to the first, but with the precursor molecules arriving on the lunar surface from rocket exhaust, while the third postulates that they were delivered to the moon via asteroids, which are thought to harbor chemical reactions that create amino acids.

Terrestrial contamination. The final possibility has perhaps always been the most likely—that the organic compounds are simply the product of terrestrial contamination, from equipment brought to the moon during the Apollo missions, or introduced during handling when they arrived back on earth.

See Gizmag.com for the answer to this mystery: <http://www.gizmag.com/nasa-lunar-organic-matter-origin-solved/40112/>

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